

AMENDMENTS TO THE CLAIMS

Upon entry of the present amendment, the status of the claims will be as shown below.

This listing of the claims replaces all previous versions and listings of the claims in the present application.

Listing of Claims

1. – 23. (Cancelled)

24. (Previously Presented) The circuit substrate production method according to claim 45, wherein information is recorded as a two-dimensional code on the information recording portions.

25. (Previously Presented) The circuit substrate production method according to claim 45, wherein information related to production at the substrate manufacturer and information related to production at the mounting manufacturer are recorded on the information recording portions at the substrate manufacturer.

26. (Cancelled)

27. (Previously Presented) The circuit substrate production method according to claim 46, wherein, at the mounting manufacturer, substrate mounting is performed based on information which is read from the information recording portions and is related to mounting manufacturer production.

28. (Previously Presented) The circuit substrate production method according to claim 45, wherein substrate production information and identification information read from the information recording portions are combined, are transmitted to a data processing center connected via a communication network, and are data-processed in the data processing center to thereby construct various databases, and wherein the substrate manufacturer and the mounting manufacturer perform required processing by retrieving required data from the databases via the communication network.

29. (Previously Presented) The circuit substrate production method according to claim 46, wherein substrate production information and identification information read from the information recording portions are combined, are transmitted to a data processing center connected via a communication network, and are data-processed in the data processing center to thereby construct various databases, and wherein the substrate manufacturer and the mounting manufacturer perform required processing by retrieving required data from the databases via the communication network.

30. (Previously Presented) The circuit substrate production method according to claim 28, wherein the databases contain information about production histories at both the substrate manufacturer and the mounting manufacturer.

31. (Cancelled)

32. (Previously Presented) The circuit substrate production system according to claim 47, wherein the recorder is configured such that substrate manufacturer production information and mounting manufacturer production information are recorded on the information recording portions.

33. (Previously Presented) The circuit substrate production system according to claim 47, further comprising a data processing center which is connected to the substrate manufacturer and the mounting manufacturer via a communication network and processes data transmitted from the substrate manufacturer and the mounting manufacturer to thereby construct various databases, wherein a reader and a data processor-transmitter-receiver are provided in the substrate manufacturer and the mounting manufacturer, the reader reading out identification information recorded on the information recording portions, the data processor-transmitter-receiver combining and transmitting production information about each of the substrates in the substrate manufacturer and the mounting manufacturer and the identification information to the data processing center and receiving required data from the data processing center.

34. (Cancelled)

35. (Previously Presented) The multi-piece substrate according to claim 48, wherein production histories at both the substrate manufacturer and the mounting manufacturer are recorded on the information recording portions.

36. (Previously Presented) The multi-piece substrate according to claim 48, wherein substrate manufacturer production information and mounting manufacturer production information are recorded on the information recording portions.

37. (Cancelled)

38. (Previously Presented) The circuit substrate according to claim 49, wherein substrate manufacturer production information and mounting manufacturer production information are recorded on the information recording portion.

39. (Cancelled)

40. (Previously Presented) The circuit substrate production method according to claim 50, wherein information about production histories at both the substrate manufacturer and the mounting manufacturer is contained in the databases.

41. (Previously Presented) The circuit substrate production method according to claim 50, wherein information which is retrieved by the substrate manufacturer and the mounting manufacturer via the communication network and is required when required processing is performed is contained in the databases.

42. – 44. (Cancelled)

45. (Currently Amended) A circuit substrate production method in which a substrate produced by a substrate manufacturer is delivered to a subsequent mounting manufacturer for mounting a component on the substrate by the mounting manufacturer to thereby produce a circuit substrate, comprising:

producing, by the substrate manufacturer, a multi-piece substrate comprising a plurality of substrate sheets, with each substrate sheet comprising a plurality of substrate pieces, wherein the multi-piece substrate is configured to be separated at one or each of a plurality of separation levels;

configuring, by the substrate manufacturer, the multi-piece substrate to include an information recording portion that includes information related to the entire multi-piece substrate, wherein each substrate sheet is configured with an information recording portion that includes information related to the entire multi-piece substrate and information related to the identification of the substrate sheet, and wherein each substrate piece is configured with an information recording portion that includes information related to the entire multi-piece substrate, information related to a substrate sheet, and information related to the identification of the substrate piece;

recording, by the substrate manufacturer, on the information recording portions referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer; and

delivering the multi-piece substrate board to the mounting manufacturer.

46. (Previously Presented) A circuit substrate production method in which, at a mounting manufacturer, a component is mounted on a substrate, which is produced by a substrate manufacturer and is delivered to the mounting manufacturer to produce a circuit substrate, comprising:

producing, at the substrate manufacturer, a multi-piece substrate comprising a plurality of substrate sheets, with each substrate sheet comprising a plurality of substrate pieces, wherein the multi-piece substrate is configured to be separated at one or each of a plurality of separation levels;

configuring, at the substrate manufacturer, the multi-piece substrate to include an information recording portion that includes information related to the entire multi-piece substrate, wherein each substrate sheet is configured with an information recording portion that includes information related to the entire multi-piece substrate and information related to the identification of the substrate sheet, and wherein each substrate piece is configured with an information recording portion that includes information related to the entire multi-piece substrate, information related to a substrate sheet, and information related to the identification of the substrate piece;

recording, at the substrate manufacturer, on the information recording portions referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer;

delivering the multi-piece substrate to the mounting manufacturer; and

recording, at the mounting manufacturer, mounting manufacturer identification information.

47. (Currently Amended) A circuit substrate production system in which a multi-piece substrate comprises a plurality of substrate sheets, with each substrate sheet comprising a plurality of substrate pieces, wherein the multi-piece substrate is configured to be separated at one or each of a plurality of separation levels, is produced at a substrate manufacturer, the multi-piece substrate produced at the substrate manufacturer being delivered to a subsequent mounting manufacturer, and in which an electronic component is mounted on a substrate piece, at the mounting manufacturer to thereby produce a circuit substrate, wherein:

the multi-piece substrate is configured, by the substrate manufacturer, to include an information recording portion that includes information related to the entire multi-piece substrate, wherein each substrate sheet is configured with an information recording portion that includes information related to the entire multi-piece substrate and information related to the identification of the substrate sheet, and wherein each substrate piece is configured with an information recording portion that includes information related to the entire multi-piece substrate, information related to a substrate sheet, and information related to the identification of the substrate piece;

the information recording portions include referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer;

a recorder, provided at the substrate manufacturer, that records the included information in the information recording portions; and

a reader, provided at the mounting manufacturer, that reads out information from the information recording portions.

48. (Currently Amended) A multi-piece substrate having a plurality of substrate sheets, with each substrate sheet comprising a plurality of substrate pieces, wherein the multi-piece substrate is configured to be separated at one or each of a plurality of separation levels, wherein:

the multi-piece substrate is configured, by the substrate manufacturer, with an information recording portion that includes information related to the entire multi-piece substrate, wherein each substrate sheet is configured with an information recording portion that includes information related to the entire multi-piece substrate and information related to the identification of the substrate sheet, and wherein each substrate piece is configured with an information recording portion that includes information related to the entire multi-piece substrate, information related to a substrate sheet, and information related to the identification of the substrate piece; and

the information recording portions are configured, by the substrate manufacturer, with referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer.

49. (Currently Amended) A circuit substrate which is formed by mounting a component on a substrate piece formed by separating a multi-piece substrate, into a plurality of substrate sheets, and further separating each substrate sheet into a plurality of substrate pieces, wherein the multi-piece substrate is configured to be separated at one or each of a plurality of separation levels, wherein:

an information recording portion provided in the circuit substrate is configured, by the substrate manufacturer, to include information related to the entire multi-piece substrate board,

information related to a substrate sheet, and information related to the identification of the substrate piece mounted with the component; and

the information recording portion is configured, by the substrate manufacturer, with referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer.

50. (Previously Presented) A circuit substrate production method, comprising:
transmitting production information and identification information from a substrate manufacturer and from a mounting manufacturer to a data processing center via a communication network;

data-processing a combination of the production information and the identification information in a data processing center to construct various databases;
wherein the production and the identification information from the substrate manufacturer includes information related to an entire multi-piece substrate, information related to one of a plurality of substrate sheets that comprise the multi-piece substrate, and information related to the identification of one of a plurality of substrate pieces that comprise the substrate sheet; and

wherein the identification information includes referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer.

51. (Previously Presented) A circuit substrate production method in which a substrate produced by a substrate manufacturer is delivered to a subsequent mounting manufacturer for

mounting a component at the mounting manufacturer to thereby produce a circuit substrate, wherein:

the substrate manufacturer records identification information on an information recording portion of the substrate, the information recording portion being configured with referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer, and

wherein the management and manufacturing information includes mounting manufacturer management information, substrate manufacturer management information, a manufacturing lot number, a total number of substrates included in a lot, a substrate sequence number, a substrate sheet code, and a substrate piece code.

52. (Currently Amended) A circuit substrate production method in which a substrate produced by a substrate manufacturer is delivered to a subsequent mounting manufacturer for mounting a component at the mounting manufacturer to thereby produce a circuit substrate, comprising:

recording, by the substrate manufacturer, identification information on an information recording portion of a substrate, wherein the identification information includes referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer;

delivering the substrate to the mounting manufacturer;

reading and combining, by the mounting manufacturer, information related to the substrate and the identification information from the information recording portion;

transmitting, by the mounting manufacturer, the combined information to a data processing center connected via a communications network;

data-processing, by the data processing center, the combined information to construct various databases; and

retrieving required data from the various databases by the substrate manufacturer and the mounting manufacturer via the communication network in order to perform required processing.

53. (Previously Presented) A circuit substrate, wherein:

an information recording portion is provided in the circuit substrate; and

identification information containing referenceable management and manufacturing information related to a substrate manufacturer and a mounting manufacturer is recorded on the information recording portion,

wherein the management and manufacturing information includes mounting manufacturer management information, substrate manufacturer management information, a manufacturing lot number, a total number of substrates included in a lot, a substrate sequence number, a substrate sheet code, and a substrate piece code.